IntelliBridge EC10 & EC5

Technical Data Sheet

Features

- Single Interface Port for connecting medical devices.
- Together with the IntelliBridge EC5 Device ID module, the IntelliBridge EC10 module and EC10 Interface Board support automatic device detection and driver selection (plug and play).
- Pre-programmed RS-232 or LAN connection available for certain external devices.
- Supports up to four waveforms.
- Supports up to 80 parameters.
- Supports external devices with multiple channels (for example, IV-pump systems).
- Easily upgradeable to interface additional supported devices as new drivers become available.
- Supports the transfer of data to Electronic Medical Records (EMRs) and Patient Data Management Systems through the IntelliVue Network and IntelliVue Information Center, for example, settings, status and numbers, from connected medical devices.
- Depending on the patient monitor, up to four modules can be used at the same time, to allow interfacing of numerous devices. Combinations of IntelliBridge EC10 and VueLink modules is supported.
- Provides comprehensive alarm identification.
- Device-specific settings are stored inside the module, so that it can be reconnected after transport without repeating the setup process.

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- Can be used with the following patient monitor families[1]:
  - IntelliVue MP40–MP90 and MX600–MX800
  - IntelliVue MX400, MX450, MX500 and MX550

Description

The IntelliBridge EC10 module/EC10 IF-Board[2] is designed to be used in an OR or ICU environment by trained healthcare professionals. Together with an EC5 ID module it provides external device interface capability to external devices at the bedside which have a serial RS-232 and/or LAN output. The EC10 modules/EC10 IF-Boards are 'universal' that is, they can be configured for various external devices[3] (for example, Anesthesia, Ventilators, Monitors, Infusion pumps). The EC5 ID modules[3] are specific to an external device.

Displayed Information

The following key data from the external device can be displayed alongside the measurement information sourced from the monitor:

- Device Type (Auxiliary, Ventilator, Gas Analyzer, Anesthesia Machine, Infusion Pumps, etc.)
- Device Name.
- Waves received by the IntelliBridge EC10 module/EC10 IF-Board.
- Numerics associated with the current wave.
- Alarm Status (ignored, accepted, or not available).
- Current device mode, if available (for example, ventilation mode: CMV).
- Selected alphanumeric information received by the IntelliBridge EC10 module/EC10 IF-Board.
- Wave scale information: Several choices of wave scale are available for most waves.

Connecting your Device to IntelliBridge EC10

One external device can be connected to the IntelliBridge EC10 module/EC10 IF-Board at a time. External devices are connected via the IntelliBridge EC5 ID module. The IntelliBridge EC5 ID module provides unique identification information to enable automatic device detection and driver selection.

Up to four IntelliBridge EC10 modules can be used simultaneously with the IntelliVue patient monitors MP60–MP90 and MX800.

Up to two IntelliBridge EC10 modules can be used simultaneously with the IntelliVue patient monitors MP40–MP50 and MX500, MX550, MX600, MX700.

Up to two EC10 IF-Boards can be used simultaneously with the IntelliVue patient monitors MX400, MX450, MX500 and MX550.

The IntelliBridge EC10 module and IntelliBridge EC10 Interface Board can be used simultaneously with the MX500 and MX550 patient monitors, but only two at any one time. For example; 2 x EC10 module, 2 x EC10 IF-Board, or 1 EC10 module + 1 EC10 IF-Board.

Installation Policy

Authorized technical personnel are responsible for the set-up and configuration of the IntelliBridge EC10 module/EC10 IF-Board and all related equipment.

Configuration or set-up of external devices furnished by other manufacturers must be carried out by the local site technical personnel, or by representatives of the external device manufacturer.

Repair Policy

Authorized Philips technical personnel are responsible for repairing faults in the IntelliBridge EC10 module/EC10 IF-Board, or any related equipment. Philips is not responsible for repairing faults in external devices.

Upgrade Policy

As additional drivers become available for connection to external devices, upgrades can be purchased to enable their connection.

Specifications

IntelliBridge EC10 Interface Module

Size (W x H x D): 36 x 102 x 111 mm (1.4 x 4.0 x 4.4 in)
Weight: 0.3 kg (0.7 lb)

IntelliBridge EC10 Interface Board

The IntelliBridge EC10 IF-Board is an option (# J32) for the MX400, MX450, MX500 and MX550 patient monitors. Refer to the relevant patient monitor Technical Data Sheet for details, especially the environmental specifications.

IntelliBridge EC5 Device ID Module

Size (W x H x D): 35 x 17 x 57 mm (1.4 x 0.7 x 2.2 in) ±5%
Weight: ≤35 g (1.2 oz.)

Standards Compliance

US Federal Law restricts this device to sale by (or on the order of) a physician. The IntelliBridge EC10 module/EC10 IF-Board and IntelliBridge EC5 ID Module are in conformity in conjunction with the Philips IntelliVue patient monitors with the essential requirements of the European Medical Devices Directive 93/42/EEC and the following major standards:

[1] patient monitors with software release G.0 or higher for devices using a dedicated driver, and software release H.0 or higher for devices using the OpenInterface driver.
[2] The MX400, MX450, MX500 and MX550 can be optionally fitted with an IntelliBridge EC10 Interface Board (Option # J32).
[3] See Ordering Information for a list of supported devices.

Safety

- EN 60601-1:1990+A1:1993+A2:1995/IEC 60601-1:1988+A1:1991+A2:1995
- EN 60601-1-1:2001/IEC 60601-1-1:2000
- UL 60601-1:2003
- CAN/CSA C22.2#601.1-M90:1990
- AS/NZS 3200.1.0-1998
- EN/IEC 60601-2-49:2001

Protected against damage from defibrillation and electrosurgery.

Electromagnetic Compatibility

EN/IEC 60601-1-2:2001

Wave Channel Size

Waveform size and positioning depends on the configuration of the system in which the module is used.

Environmental Specifications[a]	
Temperature Range	
Operating	-5–50°C (+23–122°F)
Storage	-40–70°C (-40–158°F)
Humidity Range	
Operating	15–95% RH max. @ 45°C (113°F)
Storage	Up to 90% RH max. @ 65°C (149°F)
Altitude Range	
Operating	Up to 4,600 m (-1500–15,000 ft.)
Storage	Up to 15,300 m (-1500–50,000 ft.)

a As the IntelliBridge EC10 Interface Board is built into the MX400, MX450, MX500 and MX550 Patient Monitors, refer to the relevant patient monitor for the environmental specifications.

Supported Devices (Dedicated device drivers)

For a list and details of the external device interfaces available in your country, please consult your Sales Representative.

Supported Devices (OpenInterface)

Many devices provide interfaces for Philips IntelliVue Patient Monitors based on the Philips OpenInterface protocol. For a list and details of devices that support the OpenInterface (Option 101), please consult your Sales Representative.

Ordering Information

Ordering Structure		
EC10 IntelliBridge Module[a] RS-232/LAN	865115	#A01
Driver Options	See IntelliBridge Device Library	

EC5 Device ID Module	865114
ID Module Option	See IntelliBridge Device Library
Connection Cables[b]	
Connection Cable 1.5 m	#L01
Connection Cable 3.0 m	#L02
Connection Cable 10.0 m	#L03

a Requires relevant EC5 Device ID Module. Up to ten Driver options can be ordered with one EC10 Module.
b A minimum of one of the Connection Cable options must be ordered.

IntelliBridge Device Library

For availability check with your Philips sales representative.

Respiratory Care	EC10 Option	EC5 Option
Puritan Bennett 840	201	201
Dräger Babylog VN500	213	213
Dräger Carina	218	218
Dräger Evita 4	203	203
Dräger Evita V500	206	206
Dräger Savina 300	207	207
Dräger Evita XL	202	202
GE Engström Carestation	217	217
Maquet SERVO-i	209	209
Maquet SERVO-s	210	210
Maquet SERVO-U	224	224
Maquet SERVO-n	225	225
Philips Respironics V60	101	105
Respironics (See, Philips Respironics)		

Anesthesia Delivery	EC10 Option	EC5 Option
Dräger Apollo	402	402
Dräger Fabius	404	404
Dräger Pallas	403	403
Dräger Perseus A500	412	412
Dräger Primus	401	401
Dräger Zeus IE	420	420
GE Aisys	407	407

GE Avance	406	406
GE Avance CS2	421	421
GE Aisys CS2	422	422
GE Aespire View	419	419
GE Aespire 7100	414	414
GE Aespire 7900	418	418
GE Aestiva 7100	408	408
GE Aestiva 7900	417	417
Maquet FLOW-i	411	411
Philips IntelliSave AX700	101	104

Infusion Devices	EC10 Option	EC5 Option
B.Braun Space	501	501
Fresenius-Kabi Link+ Agilia	512	512

Standalone Patient Monitoring Systems	EC10 Option	EC5 Option
Philips Respironics NM3	101	102
Covidien BIS VISTA	808	808
Edwards EV1000	711	711
EdwardsVigilance	701	701
Edwards Vigilance II	702	702
Edwards Vigileo	703	703

Hemodialysis	EC10 Option	EC5 Option
Gambro Prismaflex	803	803

Infant Thermal Care	EC10 Option	EC5 Option
Dräger Babytherm	801	801
Dräger Caleo	810	810

Philips IntelliVue Demo Devices	EC10 Option	EC5 Option
Philips Anesthesia Demo	400	400
Philips Ventilator Demo	200	200

Gas Analyzers	EC10 Option	EC5 Option
TcG10	301[a]	301[a]

a Can only be ordered together with an IntelliVue TcG10 (865298)

Open Interface supported devices	EC10 Option	EC5 Option
Open Interface	101	101 – 105

New drivers are continuously being developed. For a complete and updated Device Library, please contact your local Sales Representative.

EC10 Patient Monitor Compatibility	
IntelliVue MP40, MP50, IntelliVue MX500, MX550, MX600, MX700	up to 2 EC10 modules
IntelliVue MP60, MP90, IntelliVue MX800	up to 4 EC10 modules
IntelliVue MX400, MX450, MX500, MX550,	up to 2 EC10 Interface Boards

Disclaimer

Philips makes every effort to ensure that signal names are maintained between their monitors and any interfaced external devices. However, in some cases, the wave and numeric labels used on the monitor may be different from those used on the interfaced external device. Philips will not be held responsible for any erroneous or inaccurate data that is interfaced from external devices furnished by other manufacturers.

If manufacturers other than Philips make changes to any IntelliBridge EC10-supported device, Philips will try to ensure that interfacing to that device remains possible. However, Philips reserves the right to discontinue interfacing to any device.

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865115 & 865114 comply with the requirements of the Council Directive 93/42/EEC of 14 June 1993 (Medical Device Directive).

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